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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,730	02/22/2002	Lysander Lim	SILA:106	2831

7590

04/17/2003

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EXAMINER

NGUYEN, HIEP

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/081,730

Applicant(s)

LIM ET AL.

Examiner

Hiep Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The following IDS items are not considered because the hard copies are not supplied:  
B1-B6, C1-C90 and C96.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first inductance circuit” in claim 15, “the second inductance circuit” in claim 16, “ a fifth conductance feature”, “first and second solder bumps” in claim 17, “third and fourth substrate bonding pads”, “ a sixth conductive feature”, “third and fourth solder bumps”, in claim 18, “a sixth conductive feature” in claim 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 3-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and /or clarification is required.

Regarding claims 1 and 10, the recitations “a first inductance circuit” and “a second” inductance circuit” are indefinite because it is unclear as to these “a first inductance circuit” and “a second” inductance circuit” are circuits comprising inductors or they are just single inductors. The recitation “substantially symmetrical geometric characteristics” is indefinite because it is not clear what “symmetrical geometric characteristics” is meant by.

Regarding claims 13 and 14, the recitation “alternate electrical contacts” is indefinite because it is not clear what it is meant by since there are only two contacts (bonding pads) for

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each inductance. The Applicant is requested to point out what drawing claims 13 and 14 read on and to point out the “first set of at least two alternative substrate electrical contacts”, “first and second conductive features of the first inductance unit” in claim 13, “second set of at least two alternative substrate electrical contacts”, “third and fourth conductive features of the first inductance unit” in claim 14”.

Regarding claim 22, the recitation “so that an interfering magnetic signal induces a common-mode signal in the parallel combination of the first and second inductance circuits” is indefinite because it is not clear what the “a common-mode signal in the parallel combination” is meant by. Figure 14 of the present application shows that two inductors are connected together on one bonding pad and there is no common mode signal involved.

Claims 3-8, 11, 12, 15-21 and 23-39 are indefinite because of the technical deficiencies of claims 1, 10 and 22.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 10-16 is rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. (US pat. 6,424,223).

Regarding claims 1 and 10, figure 3 of Wang shows a semiconductor package comprising:

- a package substrate having a first surface (20);
- an integrated circuit electrically (22) coupled to the first surface of the package substrate, the integrated circuit and the package substrate together forming the semiconductor package; and

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“a first inductance circuit” (30) formed within the semiconductor package; and  
“a second inductance circuit” (32) formed within the semiconductor package,  
wherein the first inductance circuit is coupled in parallel to the second inductance circuit, and

wherein the first and second inductance circuits have “substantially symmetrical geometric characteristics” (see col. 1 and 2). Note that inductors (30) and (32) are parallel and symmetrical.

Regarding claims 11-14, the first, second, third and fourth “features” are the bonding pads shown in figure 3 and the inductance value also depends on the “ identity of the alternate substrate electrical contacts (bonding pads).

Regarding claims 15 and 16, elements 30 and 32 are bonding wire inductances (col. 2, lines 44-54) thus their inductances depend on the length of the wires

Claims 1 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (US pat. 6,495,912).

Regarding claim 1, figure 14 of Huang shows a semiconductor package comprising:  
a package substrate having a first surface (72);  
an integrated circuit electrically (70) coupled to the first surface of the package substrate, the integrated circuit and the package substrate together forming the semiconductor package; and

“a first inductance circuit” (first 66) formed within the semiconductor package; and  
“a second inductance circuit” (second 66) formed within the semiconductor package,  
wherein the first inductance circuit is coupled in parallel to the second inductance circuit, and

wherein the first and second inductance circuits have “substantially symmetrical geometric characteristics” (see col.6, lines 60-67 and col.7 lines 1-2). Note that the inductors are parallel and symmetrical.

***Allowable Subject Matter***

Claims 22-38 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

***Conclusion***

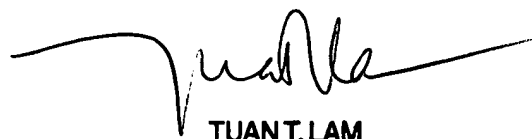
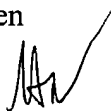
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Hiep Nguyen whose telephone number is (703) 305-0127. The examiner can normally be reached on Monday to Friday from 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 746-5716. The fax phone number for this Group is (703) 308-6251.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Hiep Nguyen

04-10-04



**TUAN T. LAM  
PRIMARY EXAMINER**